

2

In the long jump event, Ivy's coach wrote the lengths of her jumps in the table below. Ivy would like to know the lengths of her jumps in inches. Complete the table below to show the lengths in inches that she jumped.

LENGTH OF IVY'S JUMPS

Jump	Length (in feet and inches)	Length (in inches)
1	3 feet	36
2	2 feet, 4 inches	28
3	3 feet, 10 inches	46
4	2 feet, 9 inches	33

Missouri 4th Grade Math
Operational 2005
Session 1 Item 2
Score Point: 2 Point Anchor
ID# 207135
>Exemplary response - all four
components are correct (36, 28,
46, 33).

2

In the long jump event, Ivy's coach wrote the lengths of her jumps in the table below. Ivy would like to know the lengths of her jumps in inches. Complete the table below to show the lengths in inches that she jumped.

LENGTH OF IVY'S JUMPS

Jump	Length (in feet and inches)	Length (in inches)
1	3 feet	36
2	2 feet, 4 inches	29
3	3 feet, 10 inches	46
4	2 feet, 9 inches	33

Missouri 4th Grade Math
Operational 2005
Session 1 Item 2
Score Point: 1Point Anchor
ID# 123143
>Response has three of four
components correct (36, 46, 33).
>29 is incorrect.

2

In the long jump event, Ivy's coach wrote the lengths of her jumps in the table below. Ivy would like to know the lengths of her jumps in inches. Complete the table below to show the lengths in inches that she jumped.

LENGTH OF IVY'S JUMPS

Jump	Length (in feet and inches)	Length (in inches)
1	3 feet	36 inches
2	2 feet, 4 inches	4 inches
3	3 feet, 10 inches	10 inches
4	2 feet, 9 inches	9 inches

Missouri 4th Grade Math
Operational 2005
Session 1 Item 2
Score Point: 0 Point Anchor
ID# 143606
>Response has one of four
components correct (36).
>4, 10, and 9 are incorrect.

Do Number 11. Show all of your work and write your answers directly in this book.

6

In the box below, use words or numbers to show how you solved the problem and write the answer on the line.

1-2-3-4-5-6
8-16-24-32-40-48

48 pages

Missouri 4th Grade Math
Operational 2005
Session 1 Item 6
Score Point: 2 Point Anchor
ID# 183143789
>Both components are correct -- exemplary
response

183143789

Directions

Do Number 11. Show all of your work and write your answers directly in this book.

- 6 Nancy wanted to spend several hours reading during the day. She read 8 pages during the first hour. Then she read 16 pages the second hour and 24 pages during the third hour. Continue the pattern to find the number of pages Nancy read during the *sixth* hour.

In the box below, use words or numbers to show how you solved the problem and write the answer on the line.

32 for her third - 40 for her ~~fourth~~
hour - 48 for her fifth hour - 56
for her sixth hour

56

pages

Missouri 4th Grade Math

Operational 2005

Session 1 Item 6

Score Point: 1 Point Anchor

ID# 183070037

>The student understands the process, but has begun at the third hour rather than the fourth.

183070037

Directions

Do Number 11. Show all of your work and write your answers directly in this book.

- 6 Nancy wanted to spend several hours reading during the day. She read 8 pages during the first hour. Then she read 16 pages the second hour and 24 pages during the third hour. Continue the pattern to find the number of pages Nancy read during the *sixth* hour.

In the box below, use words or numbers to show how you solved the problem and write the answer on the line.

$$\begin{array}{r} 24 \\ 8 \\ 8 \\ + \\ \hline 40 \end{array}$$

40 pages

Missouri 4th Grade Math
Operational 2005
Session 1 Item 6
Score Point: 0 Point Anchor
ID# 183066352
>Incomplete process
>Incorrect answer

183066352

9

Taylor and Josh went on rides at the amusement park. Josh went on 11 rides. Taylor went on twice as many rides as Josh.

On the line below, write a number sentence to find the **total** number of rides Taylor and Josh rode.

$$22 + 11 = 33$$

Solve the number sentence, and write your answer on the line below.

33

rides

Missouri 4th Grade Math

Operational 2005

Session 1 Item 9

Score Point: 2 Point Anchor

ID# 228521796

>Exemplary Response.

> Contains 2 correct components.

> Correct number sentence.

> Correct answer.

9

Taylor and Josh went on rides at the amusement park. Josh went on 11 rides. Taylor went on twice as many rides as Josh.

On the line below, write a number sentence to find the **total** number of rides Taylor and Josh rode.

Taylor & Josh rode thirty-three rides.

Solve the number sentence, and write your answer on the line below.

33 rides

Missouri 4th Grade Math
Operational 2005
Session 1 Item 9
Score Point: 1 Point Anchor
ID# 228855790
> Contains 1 correct component.
> Correct answer.
> Number sentence does not answer prompt..

- 9 Taylor and Josh went on rides at the amusement park. Josh went on 11 rides. Taylor went on twice as many rides as Josh.

On the line below, write a number sentence to find the **total** number of rides Taylor and Josh rode.

$$11 + 11 = 22$$

Solve the number sentence, and write your answer on the line below.

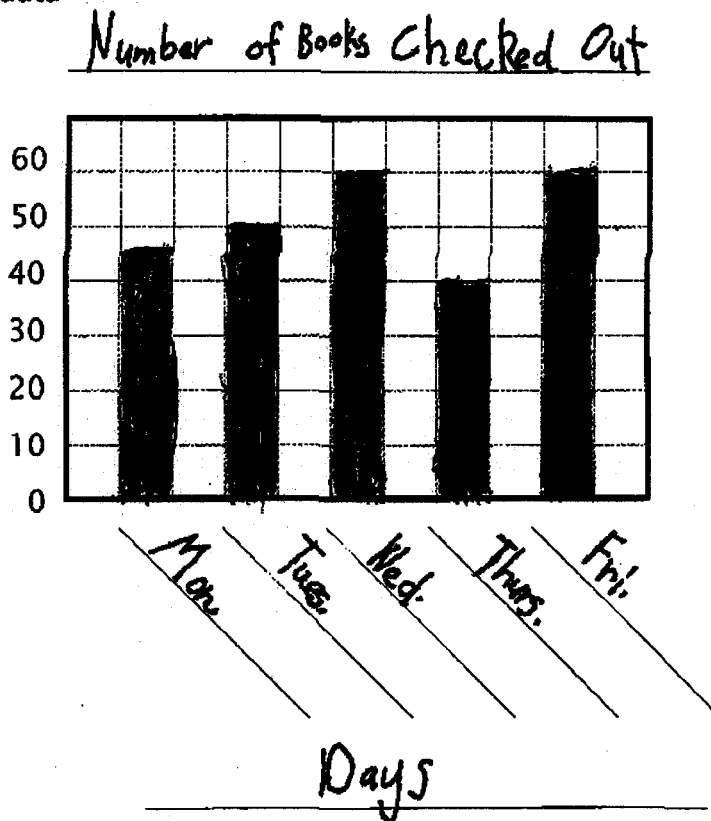
22 rides

Missouri 4th Grade Math
Operational 2005
Session 1 Item 9
Score Point: 0 Point Anchor
ID# 227970952
> Contains no correct components.
> Incorrect number sentence.
> Incorrect answer.

Use the information from the calendar to create a graph on the grid below.
In your graph, show the **total** number of books that were checked out
each weekday last month. Be sure to:

- title the graph
- label each axis
- graph all the data

Missouri 4th Grade Math
Operational 2005
Session 1 Item 10
Score Point: 4 Point Anchor
ID# 202056
Student's response fully addresses the
performance event.
>Graph is titled-Number of books checked out.
>X-axis is labeled-Days
>Monday thru Friday are correctly totaled and
graphed. 45,50,60,40,60.
>Days of the week are correctly labeled.
Monday thru Friday.
>Valid explanation offers comparison. "...Fri.
had more books checked out in one week. Fri.
had 30, but Wed only had 16 in week one."
>Omits Y-axis label.



On the lines below, use information from the calendar and your graph to write
a note to the librarian explaining on which day of the week a student
helper is needed most.

Fri Wed. and Fri. had the same total, but Fri. had more
books checked out 'n one week. Fri. had 30, but Wed
only had 16 in week one.

Go On



Use the information from the calendar to create a graph on the grid below.
In your graph, show the **total** number of books that were checked out each weekday last month. Be sure to:

- title the graph
- label each axis
- graph all the data

Missouri 4th Grade Math
Operational 2005
Session 1 Item 10
Score Point: 3 Point Anchor
ID# 126118

Student's response substantially addresses the performance event.

>Graph is titled-Number of Books Checked Out.

>X-axis is labeled-Days.

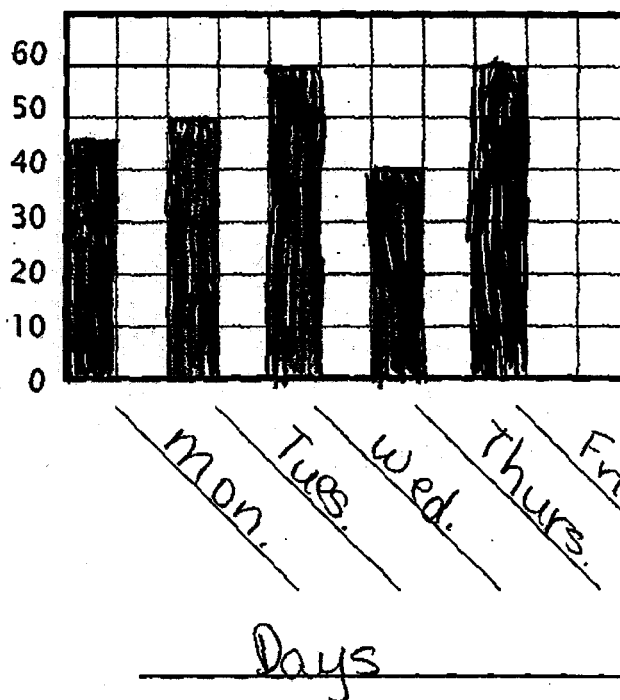
>Days of the week are correctly labeled. Monday thru Friday.

>Monday thru Friday are correctly totaled and graphed. 45, 50, 60, 40, 60.

>Omits Y-axis label.

Offers invalid explanation. "...on Wed. & Fri. because there are many checked out those days." Student does not offer one day of the week and a valid explanation of comparison for that one day.

Number of Books Checked Out



On the lines below, use information from the calendar and your graph to write a note to the librarian explaining on which day of the week a student helper is needed most.

I think you will a
helper mostly on Wed. &
Fri. because there are many
checked out those days

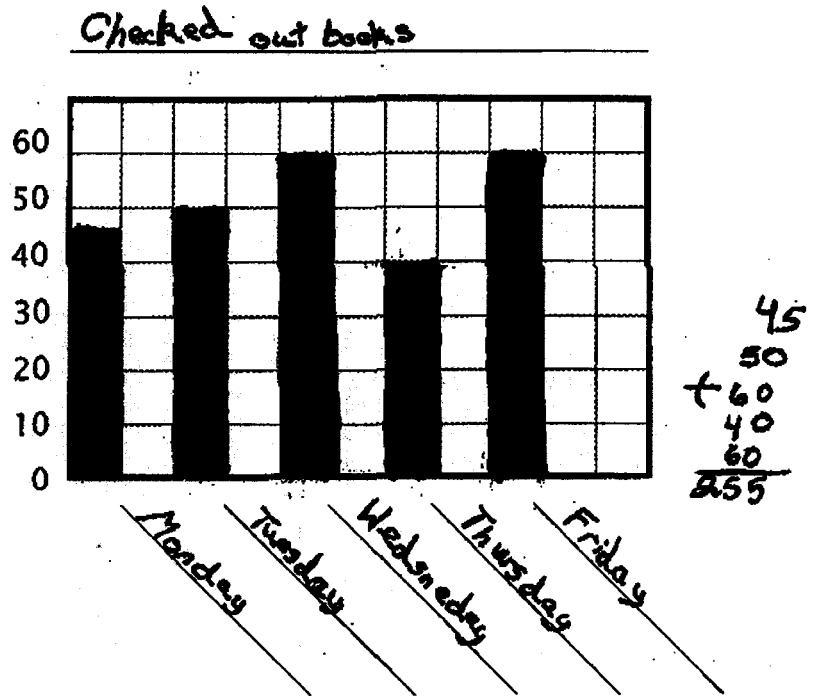
Go On



Use the information from the calendar to create a graph on the grid below.
In your graph, show the **total** number of books that were checked out each weekday last month. Be sure to:

- title the graph
- label each axis
- graph all the data

Missouri 4th Grade Math
Operational 2005
Session 1 Item 10
Score Point: 2 Point Anchor
ID# 123699
Student's response partially addresses the performance event.
>Graph is titled. Checked out books.
>Days of the week are correctly labeled. Monday thru Friday.
>Monday thru Friday are correctly totaled and graphed. 45,50,60,40,60.
>Offers invalid explanation. "I think you should have a helping hand on Wednesday."
>Incorrect X-axis label. 225 total checked out books.
>Omits Y-axis label.



225 total checked out books

On the lines below, use information from the calendar and your graph to write a note to the librarian explaining on which day of the week a student helper is needed most.

Dear Librarian,

I think you should have a helping hand
on Wednesdays.

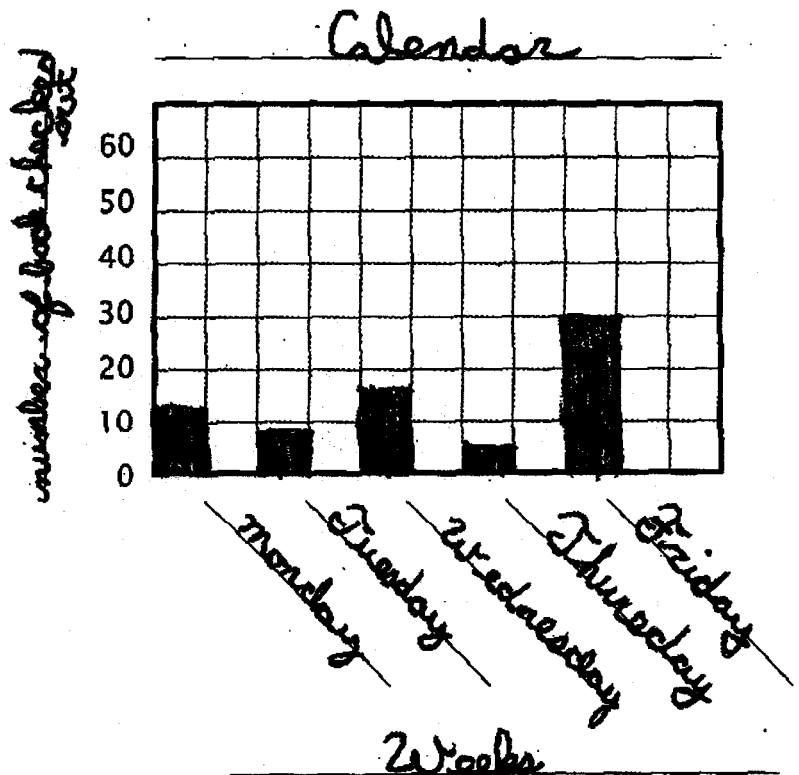
Go On



Use the information from the calendar to create a graph on the grid below.
In your graph, show the *total* number of books that were checked out
each weekday last month. Be sure to:

- title the graph
- label each axis
- graph all the data

Missouri 4th Grade Math
Operational 2005
Session 1 Item 10
Score Point: 1 Point Anchor
ID# 144284
Student's response minimally addresses the
performance event.
>Y-axis labeled. number of books checked
out.
>Days of the week are correctly labeled.
Monday thru Friday.
>Correct title. Calendar.
>X-axis label incorrect. Weeks.
>Monday thru Friday are incorrectly
graphed. 15, less than 10, 15, less than
10, 30.
>Offers invalid explanation. "On a day of the
week I would choose Tuesdays-Fridays."



On the lines below, use information from the calendar and your graph to write
a note to the librarian explaining on which day of the week a student
helper is needed most.

On a day of the week I would
choose Tuesdays-Fridays.

Go On



Use the information from the calendar to create a graph on the grid below. In your graph, show the **total** number of books that were checked out each weekday last month. Be sure to:

- title the graph
- label each axis
- graph all the data

Missouri 4th Grade Math
Operational 2005
Session 1 Item 10
Score Point: 0 Point Anchor
ID# 120953

Work consists of copying the prompt information only. Work indicates no mathematical understanding of the task.

>Omits title of the graph.

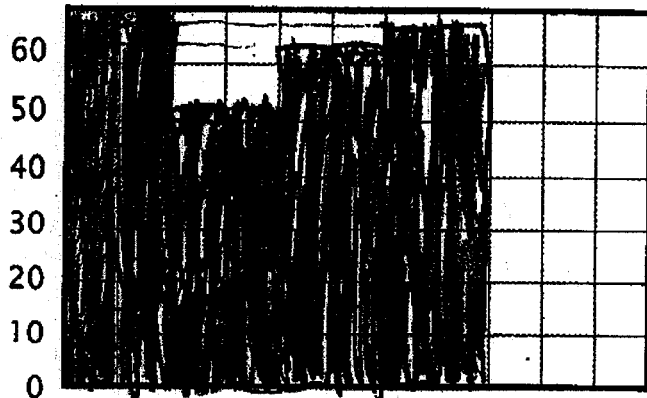
>Omits X-axis label.

>Omits Y-axis label.

>Offers invalid explanation. "friday of week 1."

>Incorrectly labels days of the week. Week 1 thru Week 4.

>Bars graphed does not represent the days of the week. Plotting weeks instead of days.



On the lines below, use information from the calendar and your graph to write a note to the librarian explaining on which day of the week a student helper is needed most.

Friday of week 1

Go On

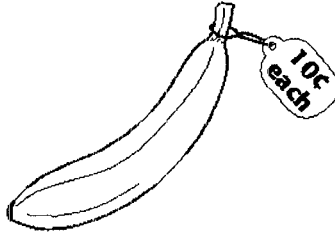


1

Ben is making fruit baskets to sell at his school's Open House. The number of each type of fruit and its price are shown below.



14 oranges



12 bananas

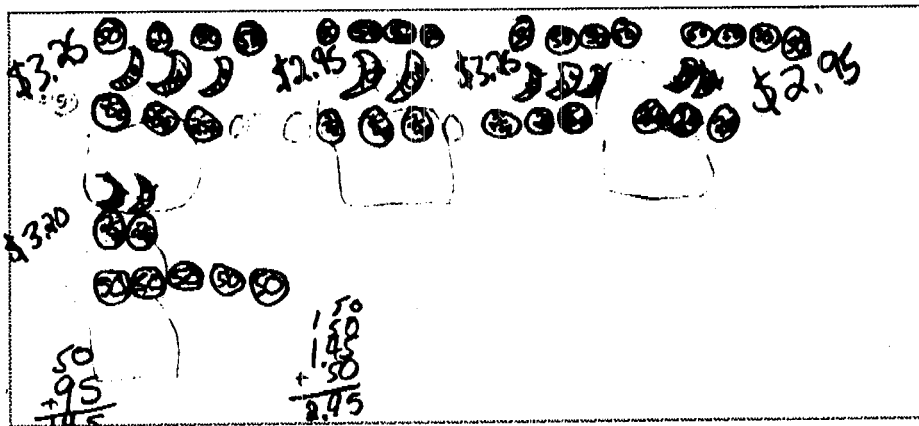


21 apples

Ben needs to do the following:

- ♦ Make 5 fruit baskets
- ♦ Use all the pieces of fruit
- ♦ Put at least 1 of each type of fruit in each basket
- ♦ Make the price of each basket \$3.50 or less

In the box below, decide how to make the fruit baskets. Use words, pictures, or numbers to show your plan.



228953676

For each basket below, list the number of pieces of fruit and the total price.

Basket 1

3 orange(s)

3 banana(s)

4 apple(s)

Price \$ 3.25

Basket 4

3 orange(s)

2 banana(s)

4 apple(s)

Price \$ 2.95

Basket 2

3 orange(s)

3 banana(s)

4 apple(s)

Price \$ 3.25

Basket 3

3 orange(s)

2 banana(s)

4 apple(s)

Price \$ 2.95

Basket 5

2 orange(s)

2 banana(s)

5 apple(s)

Price \$ 3.20

Missouri 4th Grade Math

Operational 2005

Session 2 Item 1

Score Point: 4 Point Anchor

ID #228953676

Student fully addresses the performance event

> Student has a valid plan to make the fruit baskets that fully accomplishes the tasks set forth in the prompt

> Makes 5 fruit baskets that cost 3.50 or less

> Has at least 1 of each type of fruit in each basket

> uses all the pieces of fruit

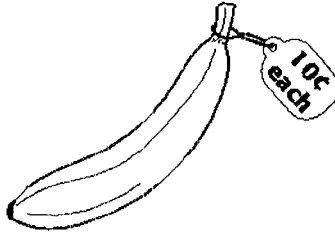
> For each basket list the number of pieces of fruit and the total price. Note: the error in computation on fruit basket 1 & 2 is a minor flaw with no effect on the reasonableness of the solution (it is the same computation error in both baskets and does not cause the basket to go over 3.50).

1

Ben is making fruit baskets to sell at his school's Open House. The number of each type of fruit and its price are shown below.



14 oranges



12 bananas

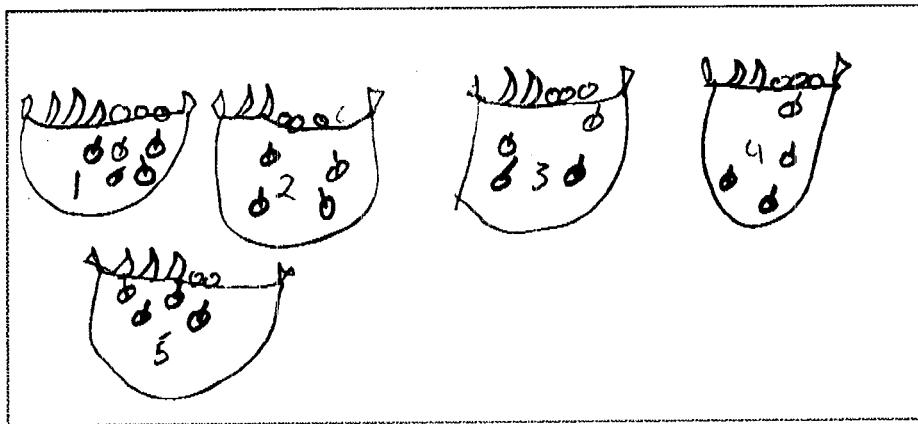


21 apples

Ben needs to do the following:

- ♦ Make 5 fruit baskets
- ♦ Use all the pieces of fruit
- ♦ Put at least 1 of each type of fruit in each basket
- ♦ Make the price of each basket \$3.50 or less

In the box below, decide how to make the fruit baskets. Use words, pictures, or numbers to show your plan.



228852738

For each basket below, list the number of pieces of fruit and the total price.

Basket 1

75¢ orange(s)

30¢ banana(s)

\$1.50 apple(s)

Price \$ 2.55

Basket 4

75¢ orange(s)

20¢ banana(s)

\$1.00 apple(s)

Price \$ 1.95

Basket 3

75¢ orange(s)

20¢ banana(s)

\$1.00 apple(s)

Price \$ 1.95

Basket 2

75¢ orange(s)

20¢ banana(s)

\$1.00 apple(s)

Price \$ 1.95

Basket 5

50¢ orange(s)

30¢ banana(s)

\$1.00 apple(s)

Price \$ 1.80

Missouri 4th Grade Math

Operational 2005

Session 2 Item 1

Score Point: 3 Point Anchor

ID # 228852738

Substantially addresses the performance event

>Student has a valid plan to make the fruit baskets that accomplishes most of the tasks set forth in the prompt

>Makes 5 fruit baskets that cost 3.50 or less

>Has at least 1 of each type of fruit in each basket

>Total prices for each basket are correct

Note: errors that have a minimal effect on the reasonableness of the solution (ability to complete requested tasks) include-

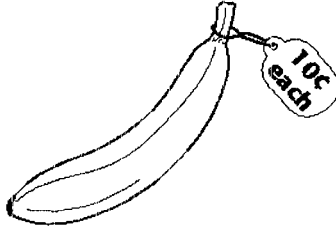
> student is unable to use the 47 pieces of fruit (Cannot place fruit into one basket to correct without a basket going over 3.50)

1

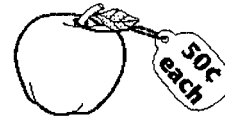
Ben is making fruit baskets to sell at his school's Open House. The number of each type of fruit and its price are shown below.



14 oranges



12 bananas

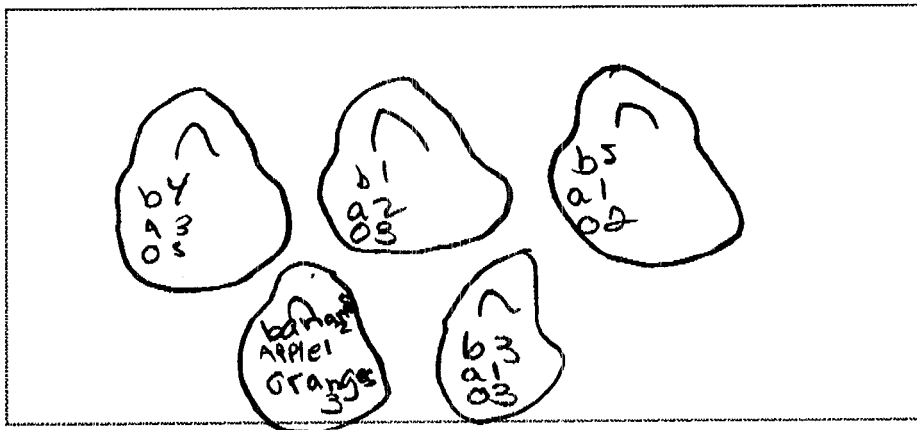


21 apples

Ben needs to do the following:

- ☉ Make 5 fruit baskets
 - ♦ Use all the pieces of fruit
 - ♦ Put at least 1 of each type of fruit in each basket
 - ♦ Make the price of each basket \$3.50 or less

In the box below, decide how to make the fruit baskets. Use words, pictures, or numbers to show your plan.



228853019

For each basket below, list the number of pieces of fruit and the total price.

Basket 1

5 orange(s)

4 banana(s)

3 apple(s)

Price \$ ~~1.50~~

Basket 4

3 orange(s)

2 banana(s)

1 apple(s)

Price \$ ~~1.30~~

Basket 2

3 orange(s)

1 banana(s)

2 apple(s)

Price \$ ~~1.30~~

Basket 3

2 orange(s)

5 banana(s)

1 apple(s)

Price \$ ~~0.40~~

Basket 5

3 orange(s)

3 banana(s)

1 apple(s)

Price \$ _____

Missouri 4th Grade Math

Operational 2005

Session 2 Item 1

Score Point: 2 Point Anchor

ID # 228853019

Student partially addresses the performance event

> Student has a valid plan to make the fruit baskets that fully accomplishes the tasks set forth in the prompt

> Makes 5 fruit baskets that cost 3.50 or less

> Has at least 1 of each type of fruit in each basket

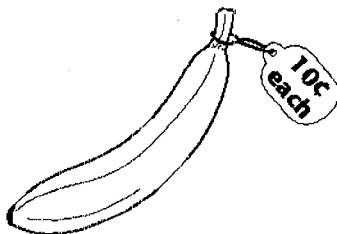
Note: The student is unable to substantially complete the tasks. Unable to utilize all pieces of fruit or provide any correct total prices for the 5 baskets.

1

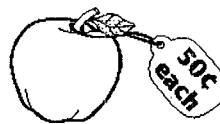
Ben is making fruit baskets to sell at his school's Open House. The number of each type of fruit and its price are shown below.



14 oranges



12 bananas

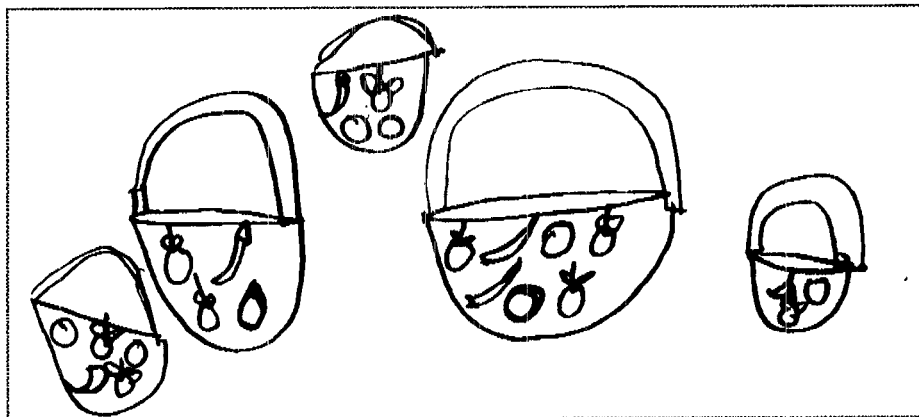


21 apples

Ben needs to do the following:

- ♦ Make 5 fruit baskets
- ♦ Use all the pieces of fruit
- ♦ Put at least 1 of each type of fruit in each basket
- ♦ Make the price of each basket \$3.50 or less

In the box below, decide how to make the fruit baskets. Use words, pictures, or numbers to show your plan.



228853282

For each basket below, list the number of pieces of fruit and the total price.

Basket 1

\$3.00 orange(s)

\$1.00 banana(s)

\$2.00 apple(s)

Price \$ \$6.00

Basket 4

\$8.00 orange(s)

\$1.00 banana(s)

\$0.00 apple(s)

Price \$ \$9.00

Basket 3

\$5.00 orange(s)

\$0.00 banana(s)

\$0.00 apple(s)

Price \$ \$5.00

Basket 2

\$4.00 orange(s)

\$1.00 banana(s)

\$1.00 apple(s)

Price \$ \$2.00

Basket 5

\$3.00 orange(s)

\$1.54 banana(s)

\$0.52 apple(s)

Price \$ \$4.06

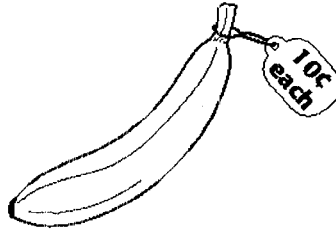
Missouri 4th Grade Math
Operational 2005
Session 2 Item 1
Score Point: 1Point Anchor
ID #228853282
Student minimally addresses the performance event
> Student has a valid plan- begins grouping the fruit into the 5 baskets
Is unable to fulfill any other tasks required to complete the event.

1

Ben is making fruit baskets to sell at his school's Open House. The number of each type of fruit and its price are shown below.



14 oranges



12 bananas

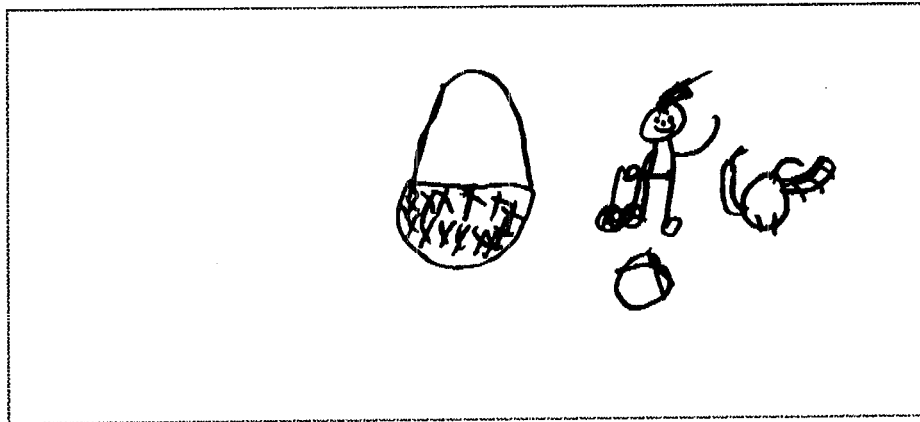


21 apples

Ben needs to do the following:

- ♦ Make 5 fruit baskets
- ♦ Use all the pieces of fruit
- Put at least 1 of each type of fruit in each basket
- ♦ Make the price of each basket \$3.50 or less

In the box below, decide how to make the fruit baskets. Use words, pictures, or numbers to show your plan.



228854213

For each basket below, list the number of pieces of fruit and the total price.

Basket 1

25¢ orange(s)

10¢ banana(s)

50¢ apple(s)

Price \$ 50¢

Basket 4

25¢ orange(s)

10¢ banana(s)

50¢ apple(s)

Price \$ 25¢

Basket 3

25¢ orange(s)

10¢ banana(s)

50¢ apple(s)

Price \$ 10¢

Basket 2

25¢ orange(s)

10¢ banana(s)

50¢ apple(s)

Price \$ 50¢

Basket 5

25¢ orange(s)

10¢ banana(s)

50¢ apple(s)

Price \$ 25¢

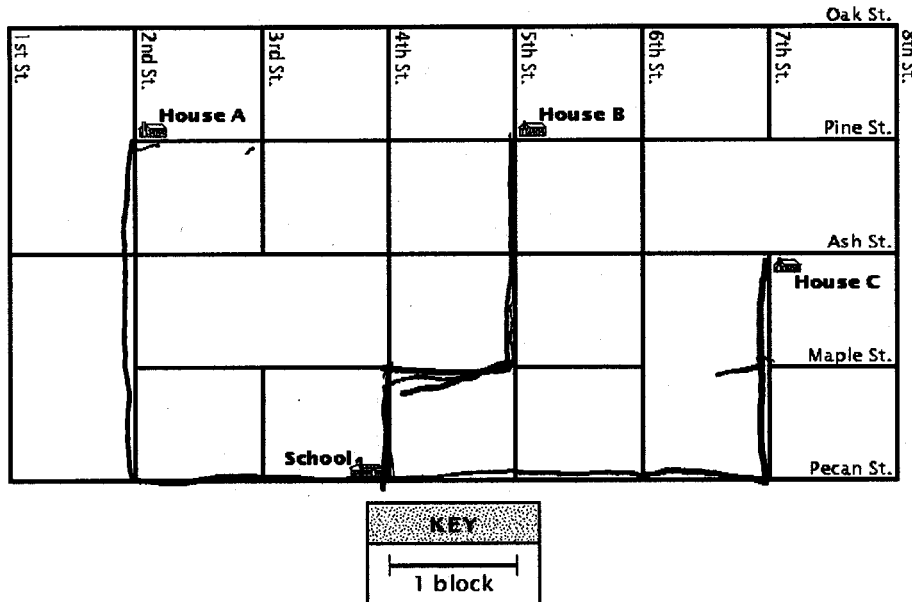
Missouri 4th Grade Math
Operational 2005
Session 2 Item 1
Score Point: 0 Point Anchor
ID # 228854213
Work consists of copying information provided in the prompt.

Directions

Do Number 11. Show all of your work and write your answers directly in this book.

5

Look at the map below.



Jesse's mom wants to move into the house that is the shortest distance to Jesse's school. On the line below, write which house is the best choice.

House B

On the lines below, explain how you know this is the shortest route to school.

Cause House B is only 4 blocks
away A is 5 blocks and C is
5 blocks also.

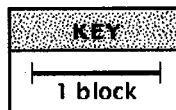
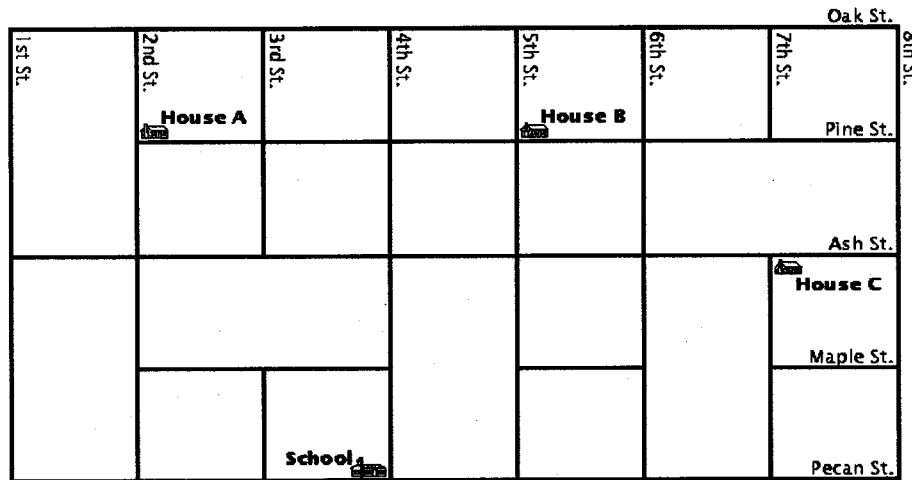
183083225

Missouri 4th Grade Math
Operational 2005
Session 2 Item 5
Score Point: 2 Point Anchor
ID# 183083225
>Exemplary response -- both
components are correct

Directions

Do Number 11. Show all of your work and write your answers directly in this book.

5 Look at the map below.



Jesse's mom wants to move into the house that is the shortest distance to Jesse's school. On the line below, write which house is the best choice.

House B

On the lines below, explain how you know this is the shortest route to school.

Because Jesse would only
have to walk 4 blocks to
school.

Missouri 4th Grade Math

Operational 2005

Session 2 Item 5

Score Point: 1 Point Anchor

ID# 183080288

183080288

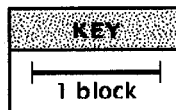
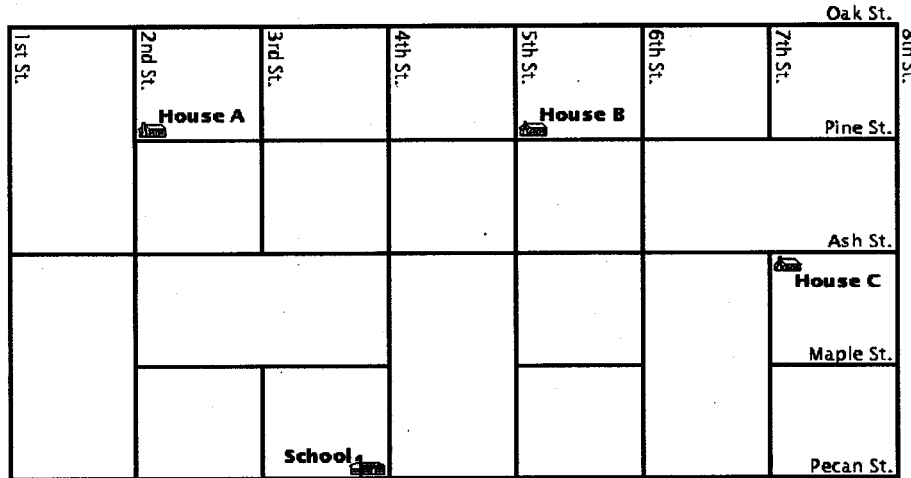
>One component is correct -- House B

>Student does not fully explain why House B is the shortest distance. No distance comparison is made to the other houses.

Directions

Do Number 11. Show all of your work and write your answers directly in this book.

5 Look at the map below.



Jesse's mom wants to move into the house that is the shortest distance to Jesse's school. On the line below, write which house is the best choice.

House C

On the lines below, explain how you know this is the shortest route to school.

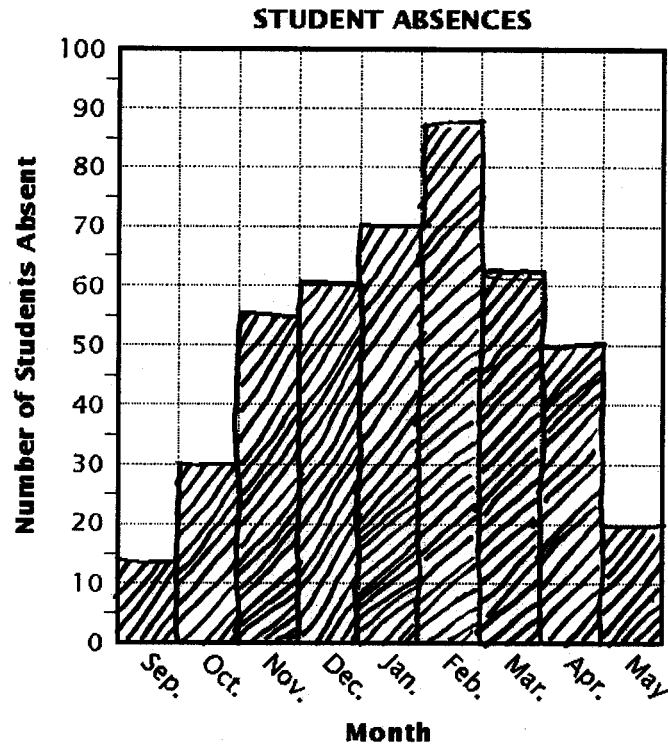
Jesse would have to
walk not very far.

Missouri 4th Grade Math
Operational 2005
Session 2 Item 5
Score Point: 0 Point Anchor
ID# 183063067
>No components are correct

183063067

7

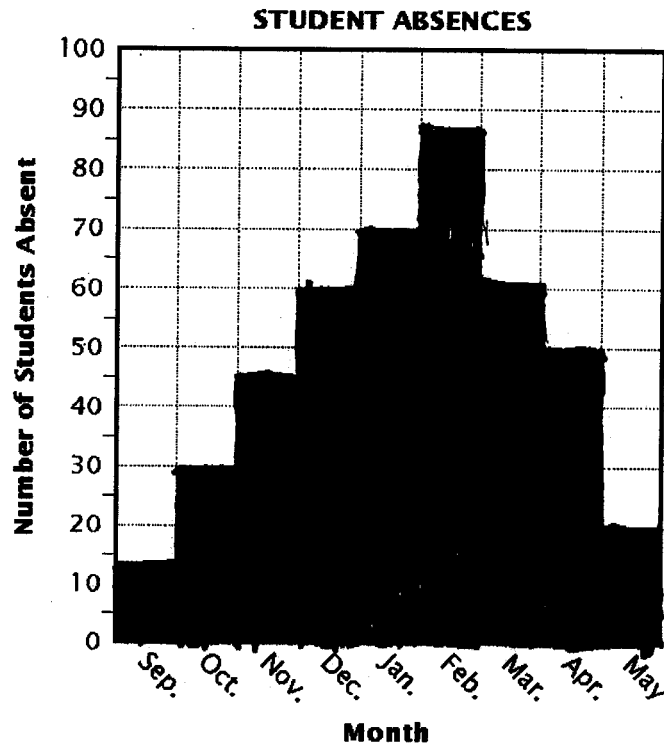
On the grid below, create a *bar graph* to show the number of students absent each month.



Missouri 4th Grade Math
Operational 2005
Session 2 Item 7
Score Point: 2 Point Anchor
ID# 228742423
>Exemplary response
>Contains nine correct components.

7

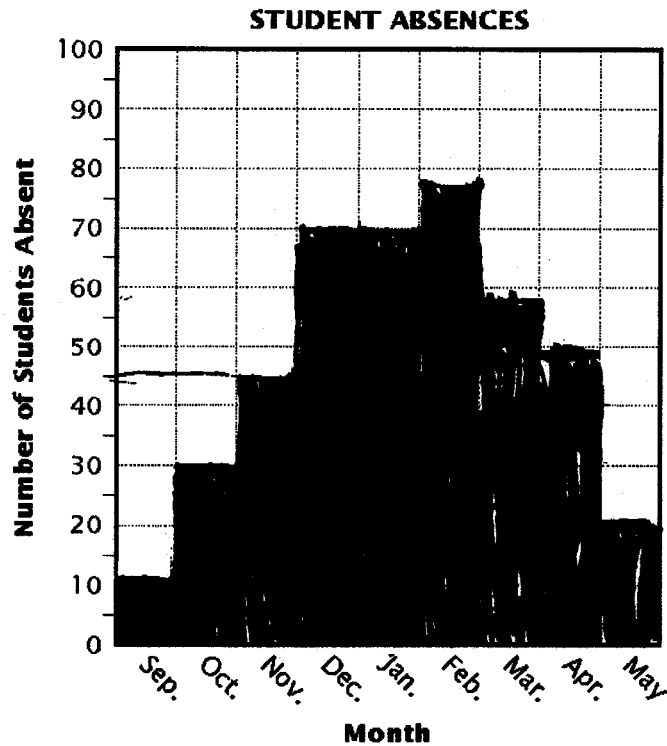
On the grid below, create a *bar graph* to show the number of students absent each month.



Missouri 4th Grade Math
 Operational 2005
 Session 2 Item 7
 Score Point: 1 Point Anchor
 ID# 227245229
 > Contains 8 correct components.
 > Nov is incorrect.

7

On the grid below, create a **bar graph** to show the number of students absent each month.



Missouri 4th Grade Math
 Operational 2005
 Session 2 Item 7
 Score Point: 0 Point Anchor
 ID# 228845144
 > Contains 5 correct components (Sep., Oct., Jan., Apr., and May).
 > Nov., Dec., Feb., Mar. are incorrect.
 > Needs 6 correct for a point.